On some Syrphidae from New Guinea and Australia

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On the request of Dr. P. I. Persson, the author examined 142 Syrphids out of the collection of the Naturhistoriska Riksmuseet at Stockholm.

The flies were collected in New Guinea or Australia. All but one of the specimens from New Guinea were collected by Sten Bergman in 1949. The Australian specimens were collected by Eric Mjöberg during his journey in 1910—1913.

The specimens collected by Bergman have been dated exactly. Unfortunately there are no dates on the locality-labels of Mjöberg's flies.

Mostly all of the specimens are in fairly good condition.

The lot comprised 35 species, of which three are new. The types are in the collection of the Museum at Stockholm. By the courtesy of the Museum-direction, and Dr. P. I. Persson, the paratypes, and some duplicates of other species, are in the author's collection.

As a contribution to the knowledge of the distribution some specimens in the author's collection have also been recorded.

In view of the scattered nature of the literature dealing with the Syrphidae of the Papuan-australian region this report may be of use for the knowledge of its Syrphids-fauna. Also for that reason a more comprehensive, though by far not complete, list of literature has been added.

The following abbreviations have been used in the list:

A. = Australia N.G. = New Guinea 8/5 = 8 May 1959.

List of Species

1. *Paragus crenulatus* Thomson

Thomson, C. G., 1868, Eugenies Resa: 503

A: Queensland, Yarrabah, 1 ♂, 1 ♀.

N.G.: Sorong, 10—16/5, 3 ♂, 7 ♀, Wailibit, 18/6, 1 ♀, Manokwari 25/9, 1 ♂.

Thomson described the species after a male from China but now the species is known from the whole of the Oriental and Malayan regions. Stuckenberg already supposed the occurrence of the species in Australia.

2. *Melanostoma univittatum* (Wiedemann)

Wiedemann, 1824, Analecta Entom.: 36 (Syrphus)

A large number of specimens (21 ♂—29 ♀) from Australia: Queensland

Bellender Ker, Cedar Creek, Evelyne, Cap York, Colosseum and Christmas Creek.

Though described from "Ostindien" this species is very common in the whole Indo-australian region.

3. *Melanostoma fumivenosum* nov. sp.

Female. — Length 7.5 mm. Head black, seen from above about twice as broad as long and somewhat broader than thorax. Front at vertex about one fifth of the breadth of head widening downward to one third of the breadth of head at level of antennae. Face one third of the breadth of head, with parallel sides. Vertex and front shiny black, face black with obscure white pollen. Facial tubercle round and large in frontal view but little projecting in profile. Below the tubercle the face descends perpendicularly to the oblique mouthborder. Cheeks moderately broad. Eyes bare. Ocellar triangle large, not prominent. Antennae yellow, third joint with blackish upper margin and tip. Arista yellow, microscopally pubescent. Occiput white pollinose. Face and front with very short, erect, white, scanty pile.

Thorax shining black, the mesonotum with faint bluish reflections. Mesonotal pile scanty, sub-erect, very short, white. Scutellum shining black, as long as broad, the fringe white.

Legs yellow, posterior femora with a faint brownish band near the apical fourth, the posterior tibiae somewhat darkened in the middle. Posterior metatarsi somewhat dilated and as long as the remainder joints together. All legs with yellow pile.

Wings hyaline, the stigma luteous. All longitudinal veins, and the apical cross-veins, broadly bordered with yellowish grey. Squamae and fringe greyish white. Halteres yellowish, the knob white, large, cup-shaped.

Sides of abdomen nearly parallel, slightly narrowed at the base, widest at the apex of fourth segment, pointed apically. The whole abdomen dark brown with faint bluish reflections and without any trace of markings. Abdominal pile very scanty except on the sides of the first and second segment where it is abundant, rather long, yellowish.

Holotype female (unique), New Guinea, Bivach October, 19-8-1949, Sten Bergman coll.

4. *Xanthandrus bergmani* nov. sp.

Female. Length 11.5 mm. Nearly wholly black, abdomen with two wine-red markings.

Head. Vertex, front and face shining black. Front one third of the breadth of head at level of antennae, steadily narrowing upwards to the vertex. Ocellar triangle lying on a little bump of the vertex. Facial tubercle moderately projecting and somewhat low in profile, pointed and rounded in front view. Frontal pile moderately long, erect, white, the facial pile similar but shorter. Eyes bare. Cheeks broad, shining black. Antennae dark reddish, third segment with blackish upper margin and tip. The first two antennal segments very short, the third segment very large, about four times as long as high, upper- and lower margin parallel, the tip rounded. Arista bare, reddish.

Thorax and scutellum shining black, the pile erect, short, whitish, somewhat longer on the scutellum. Scutellar fringe rather long, yellow.

Abdomen as broad as thorax, flat dorsally, the sides sub-parallel. First abdominal segment, and the basal third of the second segment, shining black, the remainder of the abdomen dullish black. Third segment with two small, widely separated, basal, sub-triangular markings, not reaching half the length of the segment. Venter black with indistinctly reddish incisures. Abdominal pile white.

Fore- and middle legs dark reddish, the tarsi black. Hind legs mostly blackish, the tip of the femora, and the broad base of tibiae, dark reddish. Wings long, hyaline with a slight yellowish tinge, the anterior margin beyond sc dark brown. This brown color is broadly continued over the wing-tip. Alula normal. Squamae and halteres dirty white.

Holotype, female (unique), Nw. Guinea, Bivach October, 20-8-1949, Sten Bergman coll.

5. *Asarkina aegrota* (Fabricius)

Fabricius, 1805, Syst. Antliat.: 243 (Eristalis)

N.G.: Sorong, 6/5, 24/6, 2 ♀, 10/8, 2 ♀, Wailibit, 17/6, 1 ♀.

Known from South and East Asia, Philippines and the Indonesian Archipelago. In the author's collection specimens from N.G.: Hollandia, Kota Nica (R. T. SIMON THOMAS) and from Amboyna (A. M. R. WEGNER).

6. *Asarkina biroi* Bezzi

Bezzi, 1908, Ann. Mus. Nat. Hung. VI: 498

N.G.: Wailibit, Batanta, 13/6, 1 ♀, 17/6, 1 ♀, Sorong, 10/8, 1 ♀.

Bezzi's type specimen came from N.G.: Erima, Astrolobe Bay. De Meijere records specimens from N.G.: Paumomu river and Manikion and also from Java.

7. *Asarkina ericetorum* (Fabricius)

Fabricius, 1781, Spec. Insect. II: 425 (Syrphus)

N.G.: Sorong, 10/8, 1 ♀.

Asarkina ericetorum (F) is a rather variable species known from Afrika, South and East Asia, Malaya, Indonesia, New Guinea and Oceania. The diverse varieties (or synonyms!) described by Fabricius (*salviae*), Bezzi and others are based upon the variable breadth of the black posterior margins of the abdominal segments, the median basal black spot of the abdomen, etc. The specimen above may belong to the var. *papuana* Bezzi.

The genus *Asarkina* Macquart requires revision. It's a pity, however, that some of Bezzi's type specimens were destroyed in 1958 during the troubles in Budapest.

8. *Syrphus balteatus* (de Geer) var. *nectarinus* Wiedemann

De Geer, 1776, Mém. Hist. Ins. VI: 116 (Musca)

Wiedemann, 1830, Aussereur. zweifl. Ins. II: 128

A.: Queensland: Malanda, 1 ♂, 1 ♀, Belender Ker, 1 ♀, Atherton, 1 ♀.

N.G.: Sorong, 8/5, 2 ♀. In the author's collection some specimens from N.G.: Hollandia and Ifar (G. DEN HOED).

9. *Syrphus ?damastor* (Walker)

Walker, 1849, List Dipt. Brit. Mus. III: 585 (Scaeva)

A.: Freemantle, 1 ♀.

This single female agrees rather well with Walker's description of specimens from New Holland and West-Australia except that the whole lunula above the antennal base is reddish brown. Walker's description records "a tawny spot at the base of the antennae". The second and third abdominal fasciae are entire. The length is 7 mm.

10. *Syrphus elongatus* De Meijere

De Meijere, 1908, Tijds. v. Ent. LI: 309, t. 8, fig. 32 (♂)
N.G.: Bivach October, 19/8, 2 ♀.
Described after a male and a female from N.G.: Moroka, 1300 m, (Museum Genoa).

11. *Syrphus serarius* Wiedemann

Wiedemann, 1830, Aussereur. zweifl. Ins. II: 128
N.G.: Bivach October, 19/8, 2 ♀.
Type locality: China. Also recorded from Japan, Macao, East Nepal and Ceylon. De Meijere, 1913, recorded 1 ♀ from N.G.: Heuvelbivak, and further specimens from Java and Buru: de Meij. 1914, 1929. Curran (1928) saw specimens from Pahang Malaya and (1930) from Mt. Kinabalu, Borneo. Coe, 1964, records 1 ♂ and 5 ♀ from East Nepal.

12. *Syrphus corollae* (F.) var. v i t i e n s i s Bezzi

Fabricius, 1794, Entom. Syst. IV: 306 (Scaeva)
Bezzi, 1928, Dipt. Fiji Isl.: 71
A.: Queensland, Herberton, 1 ♂; N.W. Australia, Broome, 1 ♂.
Described from the Fiji Islands. Hull, 1924, recorded 6 ♂ and 4 ♀ from Samoa. In the author's collection are several males and females from New Caledonia, Noumea (J. RAGEAU).

13. *Sphaerophoria kertészi* Klöcker

Klöcker, 1924, Mem. Queensl. Mus. VIII: 56
A.: Queensland, Christmas creek, 1 ♀.
Klöcker erected this species name for three males from Brisbane. The above female is in rather poor condition but agrees with the seven females which besides ten males are under this name in the author's collection and are all from Sydney or M'ville, N.S. Wales (R. H. MULDER).

14. *Miogramma javanum* (Wiedemann)

Wiedemann, 1824, Analecta Entom.: 34 (Syrphus)
v. d. Wulp, 1899, Tijds. v. Entom. XLII: 49 (Melithreptus)
de Meijere, 1908, Tijds. v. Ent. LI: 290 (Sphaerophoria)
Hervé-Bazin, 1923, Ann. Soc. ent. France XCII: 291 (Xanthogramma)
Frey, 1946, Notulae Entom. XXV: 167 (Miogramma)
Bánkowska, 1962, Bull. Acad. polon. Sci. X: 311 (Helenomyia) (By Mrs. Bánkowska herself (i.l.) recognised as a synonym of Miogramma Frey).
A.: Queensland, Cedarcreek, 1 ♂, Atherton, 1 ♀.
N.G.: Sorong, 5 ♀, 1—16/5. In the author's collection 1 ♂ from N.G.: Hollandia, Kota Nica, Aug. 1958 (R. T. SIMON THOMAS).
Described by Wiedemann as a *Syrphus* the species was brought by Kertész under *Melithreptus* Lw., the latter being a synonym of *Sphaerophoria*

St.F. & S. Hervé-Bazin transferred the species to *Xanthogramma* Schiner. Finally Frey erected the genus *Miogramma* for those *Xanthogramma* species in which the sides of the abdomen are not marginated. Bánkowska, 1962, examined the male genitalia of *javanum* Wd. and found them rather distant from those in *Xanthogramma*.

In both sexes the species is recognizable by the characteristic markings on the fifth abdominal segment as drawn by Bánkowska in the male (fig. 7). In all of my ♀ *javanum* the fifth abdominal segment has two markings more or less similar to those in the male. Highly probably the female pictured by Bánkowska fig. 9 does not belong to *javanum* Wd.

According to de Meijere (1908: 291) and Kertész himself (1910: 136) *Miogramma distinctum* (Kert.) is merely a variety of *javanum* in which the face is wholly yellow; in typical *javanum* species the face has a black median fascia. All specimens from Sorong mentioned above belong to the variety d i s t i n c t u m (Kert.).

The species is known from S. India, Ceylon, Sumatra, Java, Nw. Guinea, N. Australia, Fiji Isl. and Honolulu.

15. *Ischiodon scutellaris* (Fabricius)

Fabricius, 1805, Syst. Antliat.: 190 (Milesia)
A.: Queensland, Yarraban, 2 ♂.
N.G.: Sorong, 24/6, 2 ♂, 8 & 16/5, 3 ♀.

Frequent in S. India and Ceylon. Also recorded from Formosa, Japan, Malaya, the Indonesian Archipelago and Oceania (Marianas, Eniwetok, Truk, Samoa, Fiji Isl.).

16. *Baccha denhoedi* v. Doesburg

van Doesburg, 1959, Ent. Berichten 19: 232 (♀)
N.G.: Manokwari, 25/9, 1 ♀.

17. *Baccha meijerei* Kertész

Kertész, 1913, Ann. Mus. nat. Hung. XI: 278; fig. 6 a, 6 b
N.G.: Wailibit, Batanda, 17/6, 1 ♂.

De Meijere records specimens from Java, Simalur and Buru; Keiser, 1949, specimens from Sumba.

The name *meijerei* was given by Kertész to specimens of *B. pedicellata* de Meij. (nec Doelschall). The above specimen agrees well with the characters given by Kertész for *B. meijerei* except for the length which is nearly 10 mm instead of 13 mm as stated by Kertész for the female.

18. *Baccha monobia* Terry

Terry, 1905, Bull. Exp. Stat. Hawaii 1: 179
A.: Queensland, Atherton, 1 ♀.

Described by Terry after one male from Kuranda, Queensland. Kertész's Catalogue incorrectly gives Perkins as author-name. Terry described *Baccha siphanticida* and *B. monobia* into an article treating "Leafhoppers and their enemies". Perkins was the editor of the Bulletin.

19. *Baccha pulchrifrons* Austen

Austen, 1893, Proc. Zool. Soc. Lond.: 139, t. IV, f. 10, 10 a, 11.
N.G.: Bivach October, 18/8, 3 ♀.

Described from Ceylon. Further distribution: India (W. Himalayas, Darjeeling District, Bengalen, Goa), Malaya, Japan, Philippines and Java.

20. *Baccha rubella* v. d. Wulp

V. d. Wulp, 1898, Természetrajzi Füzet. XXI: 423
N.G.: Wailibit, Batanta, 17—18/6, 1 ♂, 1 ♀.
Described from New Guinea.

21. *Baccha siphanticida* Terry

Terry, 1905, t.c.: 177, pl. X, figs. 5—8
N.G.: Sorong, 24/6, 1 ♀.
Described from A.: Queensland: Cairns and Kuranda. Terry gives also a brief description of the puparium. The larvae were found to be predators of the Fulgorid genus *Siphanta*. — One see also the note under 18. *B. monobi*.

22. *Graptomyza chaetomelas* nov. sp.

Male. — Length ±8 mm. Head much broader than the thorax but very short when seen from above. Face and lower half of front brownish yellow, upper half of front black. Front with parallel sides, about one fifth of the breadth of head. The small ocellar triangle very near to the occiput. Face in profile perpendicular below the antennae, the inclining snout rather short, the facial tubercle scarcely projecting. Facial pile erect, short, white. There is a straight, brown line between the lower eye-margin and the tip of the cone. Oral opening very long and rather broad, clypeus with a tuft of long, yellow, curled, bristly hairs. Proboscis much longer than the facial cone and directed downward. Antennae dark yellow, third segment broadly brown along the upper margin. The first two antennal segments very short with some short, black bristles basally; third segment flat, nearly five times as long as high, its upper margin straight, the lower margin slightly bent outwards, the tip rounded. Arista brown, darker to the tip, with moderately long rays. Eyes large, without enlarged facets, with very short, whitish pubescence. Occiput with long, black hairs above; behind the eyes and lower with shorter, stiff, yellowish white hair.

Mesonotum shining bluish black with faint coppery reflections; the humeri, a fascia between them but broadly interrupted medially, the very narrow lateral margin, the postalar calli, and a sub-lateral, broad vitta between humerus and postalar callus, are yellow. Lateral margin of mesonotum with nine very strong, black bristles: 2 presuturals, 3 supra-alars and 4 postalars. There is also a prescutellar row of similar bristles. Disc of mesonotum with scattered, fine punctures and moderately long, yellow hair. Pleurae yellow with yellow pile, mesopleurae with two yellow bristles. Scutellum yellow with brownish base, the depression broadly oval and deep. Scutellar margin with short, black, bristly hairs, the depression with short, yellow, silky tomentum.

Abdomen yellow; second tergite with a broad, dark brown fascia occupying about the half of the tergite but not reaching the posterior margin. Laterally this fascia is obliquely truncate, its front margin is straight. Third tergite with similar fascia, the front margin of which, however, is more produced medially. Both fasciae are lighter brown coloured medially tending to form two sub-median, darker spots. Fourth segment with one dark brown,

broad, median vitta not reaching the tip of segment. Venter yellow, the hypopygium, and a square area in front of the latter, brownish.

Femora, and the narrow tip of the tibiae, yellow with yellow pile, remainder of the tibiae, and the tarsi, dark reddish. Hind legs a little stronger than the anterior legs, their metatarsus somewhat dilated. Hind tibiae and tarsi with moderately long, black, nearly bristly hairs. Wings hyaline, the small stigma brown. Squamae colourless with narrowly brown edge and brown fringe. Halteres white.

Female. — The female is similar to the male in most respects. The third antennal segment a little more slender, being fully five times as long as high. Clypeus without a tuft of long, bristly hairs. The brown abdominal fasciae are broader, that on the third tergite nearly reaching the anterior margin medially.

Holotype, male, 17/6, and Allotype female, 15/6, New Guinea, Wailibit, Batanta, (STEN BERGMAN); Paratypes: one male, 18/6, and one female, 14/6, same locality and collector. In the author's collection one paratype male from Steenkool, North N. Guinea, (G. V. HANSEN).

This species may at once be recognized by the strong, black, marginal bristles and the complete, sub-lateral, yellow stripes of the mesonotum, besides other minor details.

23. *Eristalis collaris* de Meijere

De Meijere, 1908, Tijds. v. Ent. LI: 258
N.G.: Sorong, 8/5, 1 ♀, Wailibit, 17/6, 1 ♀.

De Meijere described the male as well as the female after specimens from N.G.: Seleo, Berlinhafen; Hapotheron; and Neu-Pommern.

24. *Eristalis copiosa* Walker

Walker, 1852, Insecta Saunders., Dipt. I: 249
A.: Queensland, Malanda, 1 ♂.

Described by Walker without habitat. Klöcker, 1924, t.c.: 57, recorded 3 ♂ and 1 ♀ from Brisbane. Ferguson, 1926, Proc. Linn. Soc. N. S. W. XXI: 518, declared *Eristalis sinuata* Thoms., 1869, and *Eristalis decora* Macquart, 1868, (preoccupied by Perty) to be synonyms of *copiosa* Walker after comparison of a specimen with Walker's type in the British Museum. The above male answers fairly to Macquart's description of the ♂ *decora*.

25. *Eristalis muscoides* Walker

Walker, 1859, Proc. Linn. Soc. Lond. III: 96
N.G.: Wailibit, Batanta, 1 ♀.
Known from N. Guinea, Amboyna and Aru Isl.

26. *Eristalis niger* Wiedemann

Wiedemann, 1824, Analecta Entom.: 38
N.G.: Sorong, 10/8, 1 ♀.

Described from Java but also recorded from Malacca, Borneo, Moluccas and N. Guinea.

27. *Eristalis resoluta* Walker

Walker, 1859, Proc. Linn. Soc. Lond. III: 95 and 129
N.G.: Wailibit, Batanta, 17/5—18/6, 5 ♀, Manokwari, 24/9, 1 ♀.
Distribution: N. Guinea, Aru, Key and Sula Isl.

28. *Eristalis smaragdi* Walker

Walker, 1849, List Dipt. Brit. Mus. III: 631
A.: Queensland: Yarrabah, 2 ♀, Cedarcreek, 1 ♀.

29. *Axona chalcopyga* (Wiedemann)

Wiedemann, 1830, Aussereur. zweifl. Ins. II: 178 (Eristalis)
N.G.: Steenkool, 21/4 — 1957, 1 ♀ (DAGNY BERGMAN).
Type locality Manilla. Also recorded from N. Guinea, Indon. Archipelago, Marianen Isl. and Malaya. In the author's collection 2 ♀, also from Steenkool (G. V. HANSEN).

30. *Kedah simpliciceps* (de Meijere)

De Meijere, 1914, Tijds. v. Ent. LVII: 146 (Eristalis)
N.G.: Wailibit, Batanta, 13/6, 2 ♀.
Described from Java. Curran, 1930, Journ. Fed. Malayan St. Mus. XVI: 331 erected the genus *Kedah* for this species on account of the absence of a facial tubercle and the gentle loop of the third vein which is nearly half as deep as it is usually in the Eristalinae. The upper mouth-edge is slightly projecting. In the author's collection 1 ♀ from Batavia, Java (v. NIDEK), and 1 ♀ from N. Guinea, Steenkool (G. V. HANSEN).

31. *Lathyrophthalmus arvorum* (Fabricius)

Fabricius, 1787, Mantissa Ins. II: 335 (Syrphus)
N.G.: Sorong, 11/5, 1 ♀.
Frequent in the whole South East Asian and Papuan regions. Described from China. In the author's collection 1 ♀ from N.G.: Hollandia (DEN HOED), besides specimens from A.: M'ville, N. S. W., (R. H. MULDER); Nw. Caledonia (J. RAGEAU); Hawaii, Kealakekua, (C. L. FLUKE don.) and Palmyra Isl. (J. L. GRESSITT don.).

32. *Lathyrophthalmus suavissimus* (Walker)

Walker, 1859, Proc. Linn. Soc. Lond. III: 95 (Eristalis)
N.G.: Sorong, 6/5, 1 ♀, Wailibit, 13—19/6, 5 ♀.
The type-locality is the Isle of Aru but the species is frequently found in New Guinea. In the author's collection are 5 ♀ from Hollandia and Dojo (DEN HOED), 5 ♀ from Steenkool (G. W. HANSEN), 1 ♀ from Amboyna (WEGNER) and 2 ♀ from Palau Isl., (GRESSITT don.).
The males seem to be rather rare. Walker and Osten-Sacken knew the female only. De Meijere (1908, t.c.: 262) described the male from Merauke, South N. Guinea.

33. *Eumerus* spec.

N.G.: Wailibit, Batanta, 19/6, 1 ♀.
The bad condition of this specimen prevents a certain identification.

34. *Eumerus ?latipes* Macquart

Macquart, 1846, Dipt. exot., Suppl. I: 133; t. XV, fig. 1, 1 a
A.: Queensland, Bellender, Ker, 1 ♀.
Macquart's description of a male from "Nouvelle Hollande" is too short (six lines!) and is giving so few particulars that it is unfit for use. Also Ferguson, 1926, t.c.: 537, did not know what to say with certainty about this species.

35. *Microdon rieki* Paramonow

Paramonow, 1956, Ann. Mag. nat. Hist. 9 (XII): 815

A. Queensland, Evelyne, 1 ♂.

Paramonow described 2 ♂ from a locality 10 miles south of Bowen, Queensland. The above male agrees fairly with the description.

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